THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 26

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte EDWARD E. JAFFE and MARTIN TANNER

Appeal No. 96-0700
Application No. 08/153,550[1]

ON BRIEF

Before KIMLIN, GARRIS and WARREN, Administrative Patent Judges.

KIMLIN, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal from the final rejection of claims 1-3, 14 and 15. Claims 4-13, the other claims in the present application, have been allowed by the examiner. A copy of illustrative claim 1 is appended to this decision.

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[1] Application for patent filed November 16, 1993. According to appellants, this application is a continuation of Application No. 07/924, 208, filed August 3, 1992; which is a continuation-in-part of Application No. 07/737,799, filed July 26, 1991; which is a continuation of Application No. 07/520,487, filed May 8, 1990, all abandoned.

The examiner relies upon the following references as evidence of obviousness:

Hein et al. (Hein)	2,985,661	May 23, 1961
Christmann et al. (Christmann)	3,538,095	Nov. 3, 1970

Hine, "Quantitative Correlations of Rates and Equilibria, Physical Organic Chemistry 85-87 and 99 (1962).

Appellants' claimed invention is directed to a process for preparing a fluorescent yellow pigment of the recited formula. The process involves reacting tetrachlorophthalic anhydride with a diaminobenzyl compound, such as o-phenylenediamine, in the presence of either acetic acid or propionic acid as a solvent.

Appellants submit at page 3 of the Brief that appealed claims 1-3, 14 and 15 stand or fall together.

Appealed claims 1-3, 14 and 15 stand rejected under 35 U.S.C. § 103 as being unpatentable over Christmann, taken alone, or in combination with Hein.

We have thoroughly reviewed each of appellants' arguments for patentability, as well as the declaration and reference evidence relied upon in support thereof. However, we fully concur with the examiner that the claimed subject matter would have been prima facie obvious to one of ordinary skill in the art within the meaning of § 103 in view of the applied prior art. Accordingly, we will sustain the examiner's rejection for essentially those reasons expressed in the Answer.

There is no dispute that Christmann discloses a process for preparing a yellow pigment which is analogous to the claimed process, i.e., Christmann utilizes tetrabromophthalic anhydride as a reactant instead of the claimed tetrachlorophthalic anhydride. We note "[a]ppellants agree that the process of present claim 1 is analogous to the reaction disclosed in the Christmann et al. reference" (page 4 of Brief). As with the claimed reaction, the Christmann reaction is performed in the presence of acetic acid as a solvent. Accordingly, based upon the close similarity in chemical structure between the chlorinated starting reactant of the claimed process and the brominated starting material of the Christmann process, i.e., the bromine substituent is the next adjacent element to chlorine in the Group VIIA halogens, we concur with the examiner that it would have been prima facie obvious for one of ordinary skill in the art to replace the bromine substituents of Christmann with the chlorine substituents of appellants with the reasonable expectation that a useful pigment would be the resultant product. Moreover, we find that the conclusion of obviousness is substantially fortified by the disclosure of Hein which expressly exemplifies the claimed reaction of tetrachlorophthalic anhydride with o-phenphenylene diamine, albeit in a different acidic solvent. In our view, not only would Hein strongly suggest

replacing the bromine substituents of Christmann with chlorine substituents, but Christmann would suggest replacing the polyphosphoric acid solvent of Hein with acetic acid. We are satisfied that the collective teachings of Christmann and Hein provide considerable evidence of the prima facie obviousness of the claimed process.

Like the examiner, we do not find that the Roberts publication cited by appellants and the declaration of Jaffe, one the present inventors, outweigh the evidence of obviousness of record. While the Roberts publication is submitted for the proposition that "the nature of remote substituents can exert an effect on the reaction" (page 4 of Brief), Roberts is only tangentially relevant to the specific reactions disclosed by Christmann and presently claimed. Roberts discloses no reactions between phthalic anhydrides and benzyl diamines. While it can be said that Roberts supports the proposition that the substitution of remote substituents may render the reaction somewhat unpredictable, it must be borne in mind that absolute predictability is not a requirement for a finding of obviousness under 35 U.S.C. § 103. In re O'Farrell, 853 F.2d 894, 903, 7 USPQ2d 1673, 1681 (Fed. Cir. 1988). The mere possibility of failure does not undermine the conclusion of obviousness. In re Moreton, 288 F.2d 940, 943-44, 129 USPQ 288, 291 (CCPA 1961).

The Jaffe declaration which characterizes the tetrabromo product of Christmann as a dye instead of a pigment is of little probative value in establishing the nonobviousness of the claimed process. The declaration includes no objective evidence that either the claimed process or its product is unexpectedly different than the process or product of Christmann. The statement that workers under Dr. Jaffe's supervision failed in their attempt to prepare a tetrafluoro compound by a process that is analogous to the one disclosed in Christmann is mostly irrelevant to the process of preparing the tetrabromo compound disclosed in Christmann and the tetrachloro compound presently claimed. Furthermore, the declaration provides no specifics regarding the "analogous" process performed by the workers. We note that appellants state at page 3 of their Reply Brief that some of the criticisms of the Jaffe declaration set forth in the Examiner's Answer may have merit, and "[a]ppellants did not rely on this declaration for any position set forth in the Appeal Brief."

Conspicuously absent in the present record is any side-by-side comparative evidence between the claimed product and either the tetrabromo yellow to red pigments of Christmann or yellow pigments of Hein's EXAMPLE 15. As a result, appellants have presented no comparative evidence with the closest prior art that

would serve to rebut the prima facie case of obviousness established by the examiner.

In conclusion, based on the foregoing, the examiner's decision rejecting the appealed claims is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED

EDWARD C. KIMLIN Administrative Patent Judge	)	
BRADLEY R. GARRIS Administrative Patent Judge	)	BOARD OF PATENT APPEALS AND INTERFERENCES
CHARLES F. WARREN Administrative Patent Judge	)	

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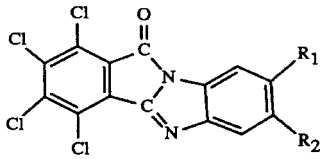
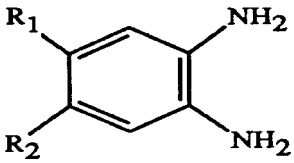
APPENDIX

1. A process for preparing a fluorescent yellow pigment of the formula



wherein R_1 and R_2 are independently hydrogen, halogen, C_1-C_5alkyl or C_1-C_3alkoxy, which comprises reacting tetrachlorophthalic anhydride with a compound of the formula



wherein R_1 and R_2 are defined as above, at an elevated temperature, in the presence of a solvent selected from the group consisting of acetic acid and propionic acid, growing said pigment in the same step, and subsequently recovering said pigment.